COVID-19 moral disengagement and prevention behaviors: The impact of perceived workplace COVID-19 safety climate and employee job insecurity

Andrea Bazzoli [*], Tahira M. Probst

Washington State University Vancouver, United States

A B S T R A C T

In response to the COVID-19 pandemic, the U.S. Centers for Disease Control and Prevention developed recommendations for individual COVID-19 prevention behaviors, as well as guidance for the safe reopening of businesses. Drawing from previous research on occupational safety, business ethics, and economic stressors, we tested the hypothesis that more positive perceptions of the workplace COVID-19 safety climate would be associated with lower employee COVID-19 related moral disengagement. In turn, we predicted that higher COVID-19 moral disengagement would be associated with lower enactment of preventive behaviors both at work and in nonwork settings (i.e., a spillover effect). Further, we investigated whether employee job insecurity would impact organizational socialization processes, such that the relationship between the perceived COVID-19 safety climate and moral disengagement would be weaker at higher levels of job insecurity. By analyzing a three-wave lagged dataset of U.S. employees working on-site during the pandemic using a Bayesian multilevel framework, we found empirical support for the hypothesized moderated mediation model. We discuss the relevance of these findings (i.e., the spillover effect and the role of job insecurity) in light of the extant safety climate literature and outline how our findings have several implications for the scope and conceptualization of safety climate in light of the surge of new working arrangements, infectious diseases, and continuing employment instability.

1. Introduction

The coronavirus pandemic has had widespread and significant effects on people's lives. In addition to the clear health-related impacts of COVID-19, researchers have attempted to elucidate how the novel coronavirus has impacted people's economic and working lives (see e.g., Bazzoli et al., 2021; Probst, Lee, et al., 2020, 2021; Sinclair et al., 2021): On the one hand, workplaces have been major hotspots for virus transmission (State of Michigan, 2021), which poses serious questions for occupational health scientists, practitioners, and employers, such as how to balance the need to provide services with the need to keep the workforce safe. On the other hand, the COVID-19 pandemic is also an economic crisis: unemployment rates soared, and career prospects declined in 2020 and 2021, making workers increasingly vulnerable to economic stress. To makes things even more worrisome, research conducted before the current pandemic already painted a grim picture of the relationship between economic stress and safety behaviors (e.g., Probst & Brubaker, 2001). Further, throughout the pandemic, numerous accounts of morally questionable behaviors related to COVID-19 began

to emerge. For instance, an American couple flew home in late 2020 after testing positive for COVID-19, potentially exposing fellow passengers (Associated Press, 2020); a wealthy Canadian couple flew to a remote indigenous community in order to get vaccinated before they were eligible under Canadian guidelines (Associated Press, 2021); and several individuals attending houses of worship staunchly refused to wear masks, potentially exposing other people to COVID-19 (NBC News, 2020).

This paper is therefore positioned at the intersection of occupational safety, economic stress, and business ethics: we aim to examine individual and organizational antecedents of COVID-19 moral disengagement among employees. Moreover, we assess how moral disengagement is related to subsequent enactment of the recommended Centers for Disease Control (CDC, 2020a) COVID-19 prevention behaviors (e.g., mask wearing, maintaining social distancing, avoiding non-essentials in both work and non-work settings.) In doing so, we examine how a prevalent economic stressor during the pandemic (i.e., job insecurity) conditionally affects the relationship between employee perceptions regarding the workplace COVID-19 safety climate and subsequent moral
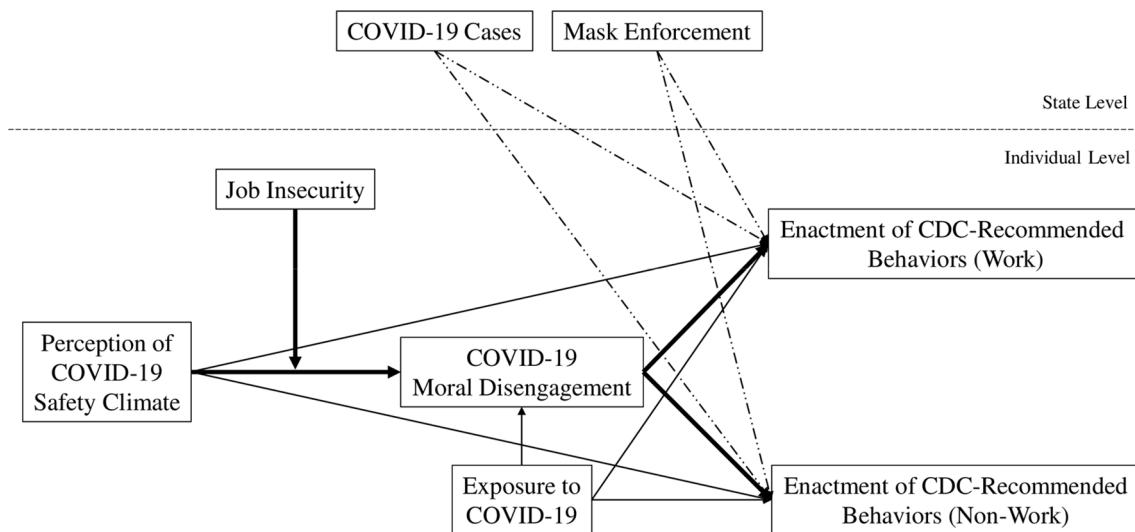

Fig. 1. Theoretical model. Note. Thicker lines represent relationships for which we have a hypothesis. Dashed lines represent cross-level direct effects.

disengagement levels, as well as their downstream effects on employee enactment of the recommended COVID-19 prevention behaviors.

1.1. Safety science during and after COVID-19

The COVID-19 global pandemic has made it clear that safety science research and practice must adapt to the new workplace. Organizations are now faced with challenges related to managing new forms of safety systems (e.g., prevention of viral transmission in addition to the traditional focus on injury prevention), the conceptualization of safety climate in organizations, increased blurring between work and personal lives (Probst et al., 2021b), pervasive economic uncertainty, as well as the ubiquitous rise of new work arrangements (Sinclair et al., 2021) which often expand our definition of the "workplace". It is therefore fundamental for safety scientists to understand how all these factors interact to effectively manage workplace safety. For example, recent research (Probst et al., 2021b) found that organizations can influence sickness presenteeism behaviors of employees in their work and non-work roles. Interesting, these findings held for both in-person and remote employees. Similarly, it has been shown that one's perceived economic condition influences what motivates employees' compliance behaviors with health guidelines (Bazzoli et al., 2021) and their enactment of such behaviors (Probst et al., 2020).

Building on previous and emergent safety research, this paper aims to investigate the future of safety in organizations with a particular focus on the intersections of safety and job insecurity, and organizations' ability to influence employees' safety behaviors beyond the workplace. Therefore, this contribution adds to the literature in several ways: first, we extend the safety climate research by investigating (i) how it can successfully be leveraged to prevent illness, in addition to foster safety performance, and (ii) how it affects behaviors outside of the traditional physical workplace. Second, we explore the role of job insecurity in managing safety systems and its potential effect on organizational socialization processes. Given that independent contractors and zero-hour employment contracts are surging, it is vital to understand how these employment conditions affect organizational approaches to build and foster a positive safety climate.

Below we first discuss the meaning and mechanisms of moral disengagement, as well as how they might manifest in the context of the pandemic. Next, we develop the construct of a workplace COVID-19 safety climate and explain how employee perceptions of the workplace COVID-19 safety climate might shape mechanisms of moral disengagement. Following this, we argue that higher levels of COVID-19

moral disengagement will be associated with lower levels of adhering to the CDC behavioral recommendations in both work and non-work settings. Finally, we consider how the economic stressor of job insecurity might weaken the potentially beneficial impact of a positively perceived COVID-19 safety climate on moral disengagement levels. Fig. 1 graphically represents the model that will be tested in this paper.

1.2. Moral disengagement in the context of COVID-19

The recent emergence of the Omicron variant (and evidence of its immune evasion, Willett et al., 2022) raises questions regarding when (and whether) sufficient herd immunity might be obtained via natural COVID-19 infection or widespread vaccination of the population. As a result, public health officials continue to emphasize the need for heavy reliance on non-pharmaceutical interventions aimed at modifying individual behavior to reduce the transmission of the novel coronavirus. Early in the pandemic, the U.S. Centers for Disease Control (CDC, 2020a) released a set of COVID-19 preventative behavioral recommendations, including maintaining a physical distance of 6 ft. from others while out in public settings, disinfecting high touch surfaces, frequent handwashing, covering one's coughs or sneezes, and wearing a cloth face covering to reduce aerosol emissions.

In the months since these preventative health guidelines were released, the U.S. has witnessed varying degrees of adherence to such recommendations. For example, the Institute for Health Metrics and Evaluation (IHME, 2021) has tracked mask usage and social distancing since August 2020. The percentage of individuals reporting that they always wear a mask in public has ranged from 65 to 77%, whereas the level of social distancing (measuring by cell phone mobility data) has similarly varied with pandemic mobility rates ranging from 13 to 35% below pre-pandemic levels. Not only have these levels varied over time, but they also vary greatly by geographical region and from individual to individual. Thus, despite the consistent messaging by public health officials regarding the importance of these preventative health behaviors in controlling the pandemic and empirical evidence to back these claims up (e.g., Fischer et al., 2021), numerous individuals choose not to adhere to these guidelines and instead engage in behaviors with potentially damaging consequences to others.

Moral disengagement (Bandura, 1990) is the process by which individuals mitigate the morally injurious consequences of their harmful behaviors toward others. These justification and rationalization mechanisms allow individuals to act outside of the bounds of normative standards of human conduct by disengaging from the moral self-

sanctions that would typically be associated with the behavior. Moral disengagement occurs via four primary avenues: (1) cognitive reconstrual of the conduct, (2) obscuring personal agency, (3) disregarding the harmful consequences of one's actions, and (4) vilification of the targets of one's behavior by blaming and/or devaluing them.

Cognitively reconstruing one's conduct involves morally reframing the detrimental conduct as socially valuable and acceptable (moral justification) or as better than more reprehensible alternative behaviors (advantageous comparison) while also euphemistically relabeling their behavior to confer a more socially acceptable status to one's behavior. For example, within the context of the COVID-19 pandemic, a restaurant owner might oppose strict capacity limits and social distancing requirements by arguing that the consequences of reduced revenue would be worse in terms of job losses or closure of the business compared to the health risks posed by greater occupancy density.

Obscuring personal agency occurs via displacement or diffusion of responsibility. With this mechanism, other people are viewed as pressuring the individual to engage in the harmful behavior and/or are actually responsible for the behavior. Within the context of the pandemic, individuals might refuse to comply with mask-wearing mandates if they think that no one else is wearing a facial covering, and it would be unfair for people to single them out for not complying.

Disregarding the harmful effects of one's actions involves minimizing, ignoring, and/or distorting the adverse consequences of one's behavior. For instance, an individual might argue that the risks associated with COVID-19 are exaggerated (i.e., "no different than the flu") and therefore the recommended prevention behaviors are unnecessary. By minimizing the perceived potential harm associated with these actions, it becomes easier to justify such action to oneself.

Finally, vilifying the target involves blaming other people or the circumstances for the consequences of one's behavior and dehumanizing adversaries. For example, people that catch COVID-19 might get blamed for exposing themselves to the virus due to their own inattention or carelessness and others might perceive therefore that they "deserved" to suffer.

Below we discuss how an organization's COVID-19 safety climate might impact the occurrence of COVID-related instances of employee moral disengagement.

1.3. COVID-19 safety climate and employee moral disengagement

Organizational climate refers to the organizational policies, practices and procedures that are valued, rewarded, and enforced within the workplace (Ostroff et al., 2012). While numerous referents of climate can exist within an organizational setting (e.g., diversity climate, justice climate, information security climate), a large body of research has demonstrated the significance of an organization's safety climate in shaping employee safety-related attitudes and behaviors (Clarke, 2006, 2010). Moreover, recent research by Petitta et al. (2017) grounded in social cognitive theory (Bandura, 2002) demonstrated that employee safety-related moral disengagement mechanisms can also be shaped and internalized as a result of perceived norms and values conveyed by the socialization processes occurring within the organization. Specifically, their research found that employees who perceived their organization to be more achievement- and results-oriented were more likely to exhibit higher levels of safety-related moral disengagement (i.e., justification of taking safety shortcuts, diffusion of safety responsibility, minimization of safety risks, etc.). On the other hand, when employees perceived that their employer valued adherence to organizational safety norms and regulations, they exhibited less activation of safety-related moral disengagement mechanisms.

In a similar fashion, we argue that over the past year, employees have been exposed on a regular basis to the subjective norms of their employer regarding the extent to which workplace behaviors aimed at preventing COVID-19 transmission are encouraged, rewarded, and valued by their employer. Just as the CDC has released guidance for

individuals, it has also provided detailed recommendations for employers (CDC, 2020b) including steps that can be implemented to reduce workplace transmission. Employee perceptions regarding these COVID-19 related policies, practices, and procedures instituted within the workplace in response to the pandemic form the basis for an organization's COVID-19 safety climate[1].

While our current research is grounded in the safety climate literature, we argue for the importance of conceptualizing a COVID-specific safety climate due to the explicit and unique recommendations that have been highly publicized by the Centers for Disease Control and Prevention (2020b) in their guidance issued to employers for how to safely operate their businesses during the pandemic. This includes measures such as: conducting daily health checks; encouraging workers who have been exposed to COVID-19 to stay home; providing policies and procedures for employees who have signs and/or symptoms of COVID-19; facilitating social distancing (e.g., working at least 6 ft. apart from others, providing physical barriers); providing necessary personal protective equipment and opportunities for frequent handwashing; and, offering telework options for workers who do not need to be on-site.

Thus, the extent to which employees view their organization as valuing, rewarding, and reinforcing the CDC workplace guidelines constitutes their individual-level perceptions of the COVID-19 safety climate. Based on social cognitive theory indicating that moral disengagement mechanisms can be internalized during organizational socialization processes coupled with prior empirical research linking such workplace norms and values to employee levels of safety-related moral disengagement (Petitta et al., 2017), we hypothesize that perceived workplace norms and values (i.e., employee perceptions regarding the COVID-19 safety climate) can impact the development of moral disengagement mechanisms that employees subsequently use to morally justify a failure to personally enact the CDC COVID-19 prevention guidelines.

Hypothesis 1. Employee perceptions of the COVID-19 safety climate will be negatively associated with COVID-19 moral disengagement.

1.4. The impact of moral disengagement on COVID-19 prevention behaviors

The choice to personally enact or not enact the CDC recommended personal COVID-19 prevention behaviors (i.e., mask wearing, social distancing, etc.) constitutes an ethical decision-making process on the part of the employee. According to Rest's (1986) model of ethical decision making, ethical behavior first requires a *moral awareness* of the potential helpful or harmful effect that their behavior could have on others. Given the frequent and widespread public health messaging on the importance and impact of the CDC COVID-19 prevention behaviors, we would argue that this first requirement has been met. Once moral awareness has occurred, employees next have to make an *ethical judgment* regarding whether enacting the CDC recommended behaviors is the appropriate course of action. If an employee deems it to be ethically appropriate, then *ethical intent* (i.e., intent to enact the behavior) is established and the likelihood of actually enacting the CDC recommended behaviors is expected to increase.

As noted by Petitta et al. (2017, p. 490), "this ethical decision-making process can be short-circuited during the second (i.e., ethical judgment)

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[1] Because our sample did not consist of individuals nested within workgroups or organizations, we could not evaluate the extent to which employee perceptions regarding the COVID-19 safety climate were shared by others in their workplace. Instead, drawing from prior research on psychological safety climate, which is an assessment of safety climate at the individual level (Griffin & Neal, 2000), we evaluated employee perceptions of the COVID-19 safety-related policies, procedures, and practices within their work environment. Research indicates that such individual-level perceptions form the basis for the development of climate at higher levels such as the workgroup or organization and are consistently related to individual safety-related attitudes and behaviors (Brondino et al., 2020).

phase" by the use of moral disengagement strategies. Specifically, employees who cognitively reframe not enacting the CDC preventative guidelines as socially acceptable, obscure their personal agency for reducing transmission of the virus, disregard or minimize the potentially harmful consequences of failure to adhere to the prevention guidelines, and/or blame or devalue those harmed by their behavior are less likely to subsequently engage in such COVID-19 prevention behaviors.

In work settings, the relationship between safety-related moral disengagement and safety behaviors such as accident under-reporting (Petitta et al., 2017), safety compliance, and safety organizational citizenship behaviors (Probst et al., 2020b) has been empirically demonstrated. We argue that in a similar fashion, employees who exhibit higher levels of moral disengagement regarding the CDC COVID-19 prevention guidelines will have lower "ethical intent" to enact such behaviors which will be manifested in their self-reported levels of enacting the CDC prevention behaviors while at work.

We also expect that the organizational socialization processes that influence the activation of moral disengagement mechanisms in the workplace will spillover to impact the behavior of employees while in non-work public settings. Given that the recommended COVID-19 prevention behaviors are highly consistent regardless of setting (e.g., maintaining social distance, wearing a mask, frequent handwashing), we expect that employees who cognitively mitigate the moral self-sanctions and perceived consequences of such potentially harmful behavior while at work will also do so in other public settings.

Hypothesis 2. COVID-19 moral disengagement will be negatively associated with enactment of the CDC recommended COVID-19 prevention behaviors in (a) work and (b) non-work settings.

1.5. Job insecurity: attenuating the influence of workplace COVID-19 safety climate

As discussed in the previous section, a workplace's COVID-19 safety climate could be priming certain organizational values and expectations into employees, thus reducing COVID-related moral disengagement. However, recent research has found that economic stressors, and in particular job insecurity, can interject in the organizational socialization process (Huang et al., 2017; Probst et al., 2020b) and potentially undo any positive effect of safety climate. Typically, COVID-19 safety climate would prime a self-regulation process that inhibits unsafe or immoral behaviors in the workplace (Bandura et al., 1996; Detert et al., 2008), but job insecurity could trigger a cognitive reframing process as a reaction to the threat of losing one's job. Given that losing one's job during an economic crisis comes at a high cost, especially in the U.S. context (e.g., losing healthcare coverage, limited job opportunities, limited jobless benefits), employee may be engaging in a cognitive process aimed at reframing their questionable COVID-related behaviors into morally justifiable actions in light of the very real chance of losing their job. In other words, employees might think that a failure to closely adhere to the recommended CDC prevention guidelines is the lesser evil of two options particularly given that losing one's job might have more severe consequences.

Social exchange theory (Blau, 1964) also seems to support a similar process. Given that people tend to attribute negative experiences in part to action taken by others (Miller & Ross, 1975), they could blame management (e.g., restructuring) or other coworkers (e.g., political behavior) for playing a role in creating their feeling of job insecurity. As a result of these perceptions, job insecure employee could feel that their organization is violating the implicit social contract between workers and management (Rousseau, 1995). Therefore, the feeling of betrayal could lead job insecure employees to disregard organizational cues, policies, and processes, such as the COVID-19 safety climate and become morally disengaged. Based on these theoretical reasons and previous research, we argue that the strength of the relationship between the perceived workplace COVID-19 safety climate and employee levels of moral disengagement likely depends on the level of employee's job

insecurity, such that the relationship would be weaker (if not null) at higher levels of job insecurity.

Hypothesis 3. Job insecurity attenuates the relationship between COVID-19 safety climate perceptions and moral disengagement.

1.6. COVID-19 safety climate's spillover effect

Traditionally, safety climate research has focused on examining only work-related covariates (Clarke, 2010). Although this is understandable, as workers are rarely asked to perform work-related safety behaviors outside of their workplace, the current pandemic might warrant a reconsideration of the traditional scope of safety management systems. A close analysis of the CDC guidance to curb the spread of the novel coronavirus reveals striking similarities between the recommended behaviors at work and outside of it. It follows that, while the enactment of CDC-recommended behaviors in the workplace could be conceptualized as safety compliance (Griffin & Neal, 2000), the same type of behavior enacted in non-work settings may also be seen as a preventative safety behavior aimed to avoid catching or transmitting COVID-19 while in non-work public settings. In fact, social cognitive theory (Bandura, 1986) suggests that employees' experiences are more likely to generalize across contexts (i.e., horizontal spillover) in which they perform similar or well-integrated tasks. As a result, an employer's efforts to communicate the value of and reinforce the enactment of the CDC recommendations in the workplace (i.e., COVID-19 safety climate) could generalize and "spill over" to employees' life outside of the workplace because they are largely being asked to enact similar behaviors in both settings. For these reasons, we advance that:

Hypothesis 4. After accounting for the indirect effect via COVID-19 moral disengagement, employee perceptions of the workplace COVID-19 safety climate will have direct positive effects on work and non-work enactment of the CDC recommendations.

2. Method

2.1. Participants and procedure

Data were collected from US-based Amazon Mechanical Turk (MTurk) workers as a part of a larger data collection project (Bazzoli et al., 2021; Probst, Lee, et al., 2020, 2021). To obtain increased data quality (Peer et al., 2014), we limited participation in the study to "high quality" MTurk workers who had a prior approval rating of 90% or higher and at least 100 tasks completed. Additionally, participants were required to hold another job outside of MTurk, as well as be working onsite and for the same employer for the duration of the survey. Data from three time points (October 2020, December 2020, and February 2021) were used to test our hypotheses; participants were paid $3.50 after each wave.

One hundred forty-one participants, nested within 38 states, completed all three waves. The majority of respondents were White (79%), male (60%), and graduated from college or higher (86%). The mean age was 41.33 (SD = 11.55). The most represented industries were retail (19%), manufacturing (12%), accommodation and food services (10%), and education (10%). Over half of the participants (55%) reported being classified as essential workers. On average, participants had worked for their employer for 7.84 years (SD = 6.32) and were working 40.13 h per week (SD = 6.22). The median organizational size was 50–249 employees.

2.2. Measures

To avoid artificially inflating covariances among variables, we used a lagged design (Podsakoff et al., 2012) of two months between each survey. COVID-19 safety climate and job insecurity were measured at Time 1. The Time 2 survey assessed COVID-19 moral disengagement. Finally, enactment of the CDC COVID-19 prevention behaviors while at work and in non-work settings was measured at Time 3.

Employee perceptions of their workplace COVID-19 safety climate was measured using 11 items that were developed by Probst et al. (2021b). Sample items assessed the extent to which an employee's workplace: "…encourages workers who have been exposed to COVID-19 to stay home," "facilitates social distancing (e.g., working at least 6 ft. apart, providing physical barriers)", and "…encourages employees to wear cloth face coverings in the workplace." Response options to the 11-item scale ranged from (1) *strongly disagree* to (7) *strongly agree*.

Job insecurity was measured using the job security satisfaction scale (JSS; Probst, 2003). Using a scoring system validated by Hanisch (1992), participants were asked to indicate whether each phrase (e.g., "never been more secure") described their job security on a scale from No (0), "Don't Know" (2), to Yes (3). Positively phrased items were reverse-coded, such that higher numbers reflect greater perceived insecurity.

COVID-19 moral disengagement was measured using an adapted version of Petitta et al.'s (2017) 12-item safety moral disengagement scale, where each original item was reframed for the COVID-19 context. A sample item is, "COVID risks are exaggerated; most day-to-day activities are not as dangerous as portrayed." which was adapted from the original, "Safety risks are exaggerated; most work is not as dangerous as portrayed." Response options to the items ranged from (1) *strongly disagree* to (7) *strongly agree*.

Enactment of the CDC recommended behaviors in work and non-work settings was measured with 8-item scales adapted from Probst et al. (2020a). In the first scale version, each participant was asked to report how often they engaged in the target behavior "while at work", whereas the instructions for the second scale were modified to ask about behaviors "when NOT at work on-site." Sample parallel items from each scale include: "I wear a mask (e.g., N95 respirator masks, medical masks, or fabric masks) when at work" and "I wear a mask (e.g., N95 respirator masks, medical masks, or fabric masks) when out in public." Response options ranged from (1) *never* to (5) *always*.

Upon reviewer recommendation, we added several controls in our model. Prior exposure to COVID-19 was entered as a control variable at the individual level and was measured using five items that asked whether (i) employees themselves, (ii) a family member or partner, (iii) relatives, (iv) close colleagues, and/or (v) good friends had caught COVID-19. If affirmative, answers were coded as 1 and summed across five items. We also added two state-level control variables: a binary variable captured whether state governments enforced (coded as 1) or did not enforce (coded as 0) the federal mask mandate,[2] and statewide COVID-19 cases per 1000 inhabitants captured COVID-19 community spread objectively.

2.3. Data analysis

We chose to analyze our data using a multilevel Bayesian approach for three substantive reasons. First, doing so allows us to update and build upon previous knowledge, instead of testing the null hypothesis over and over again. By means of specifying a prior distribution for each parameter, we incorporate pre-COVID organizational knowledge into our COVID-related data to better investigate emergent changes in

work practices and workers (Kniffin et al., 2021). Second, by using a Bayesian estimator, we mitigate concerns about the sample size, which become less relevant in a Bayesian framework (van de Schoot et al., 2014), but would be very relevant using an estimator from the maximum likelihood family. Last, Bayesian estimators outperform ML-based estimators in handling nonnormal parameters, such as indirect effects (Zhao et al., 2010), because they can handle asymmetrical distributions better.

3. Results

Descriptive statistics, reliability coefficients, and correlations are reported in Table 1. We estimated our models using a Bayesian estimator in Mplus (Muthén & Muthén, 1998-2017) requesting two chains of the Gibbs sampler and ML-based starting values. Prior distributions' characteristics and justifications are available in Table 2. We first estimated a model with noninformative priors (results available from the corresponding author upon request), then a model with weakly informative priors and 10,000 iterations (results presented in Table 3), and last we doubled the iterations to check convergence (results available from the corresponding author upon request). Although we limit the convergence discussion to the model with weakly informative priors due to space constraints, all model converged appropriately. Level-1 predictors were group-mean centered, whereas level-2 predictors were kept in the raw metric because the level-2 equation contains only first-order terms; hence, centering would only affect the interpretation of the intercept (i. e., γ_{00}; Enders & Tofighi, 2007). We estimated only intercepts-as-outcome models (Raudenbush & Bryk, 2002). We had no theoretical interest in, and therefore did not estimate, random slopes models.[3]

To monitor the model's convergence, we manually inspected the potential scale reduction (PSR) output (see Table S1 in the Supplementary Material). The algorithm stabilized after a few hundred iterations, as seen by the highest PSR falling below 1.05. Further, for each parameter, we inspected (i) the trace plots, which showed stable chains (see Figures S1-S5 in the Supplementary Material), (ii) the posterior histograms, which did not show gaps (see Figures S6-S10 in the Supplementary Material), (iii) the chains autocorrelation plot, which showed weak autocorrelations (see Figures S10-S15 in the Supplementary Material), and (iv) the kernel plots to inspect the posterior distribution, which showed smooth plots that made substantive sense (see Figures S16-S20 in the Supplementary Material). We next inspected the model fit via posterior predictive checking (i.e., the difference between the observed and simulated data). The posterior predictive p-value was 0.51, indicating a well-fitting model (95% CI x^2 values = −23.50, 21.91).

The posterior results are displayed in Table 3, along with the 95% credibility interval, an estimate of the effect of using weakly informative priors, and an estimate of the model stability (i.e., the percentage of change in posterior parameters when doubling the iterations). Adding the priors and doubling the iterations seemed to have negligible effects (computed using the Depaoli & van de Schoot, 2017, formula) on the stability of the model, as the sizes of the effect were well below 5% in the large majority of cases.[4] As hypothesized (Hypothesis 1), our posterior results show a positive effect of perceived COVID-19 safety climate on

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[2] We acknowledge that changes in organizational policy, procedures, and practices might have occurred during the survey due to a changing legal environment. Although we are not able to completely exclude this possibility, we believe that this is unlikely for the following reasons. First, at the time of our first wave, the only piece of advice for employers was a CDC (2020b) interim guidance. This guidance was not updated during the time in which our survey was open. A week before our third wave, OSHA published a guidance on January 31, 2021. However, in that document, the agency did not substantially alter the recommended policies, procedures, and practices, and instead reiterated the CDC-recommended practices, all of which are captured by the Probst et al. (2021b) scale. Nevertheless, because enforcement of the federally recommended guidance varied between states, we used state-level legal enforcement of mask mandates as a proxy variable to capture the extent to which businesses had latitude in implementing the CDC workplace guidance.

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[3] We did however estimate a null model to get an estimate of the unconditional intraclass correlation coefficient (ICC). The ICC for enactment of CDC-recommended behaviors at work was 0.16, whereas the ICC for enactment of CDC-recommended behaviors in non-work settings was 0.04.

[4] The size of the effect for a few regression coefficients exceeded 30%, which could be worrisome. However, given that both the posterior estimate and the actual change were very small (i.e., < 0.005 and < 0.002, respectively), and the substantive interpretation of the parameters remain the same (i.e., the credibility interval is centered around a value very close to zero, suggesting that it is likely that the regression coefficient represents a null effect), we concluded that the change is very small and negligible.

COVID-19 moral disengagement (posterior distribution median = −0.29, 95% CI [−0.56, −0.03]). This can be interpreted such that there is a 95% probability of the population regression coefficient falling between the boundaries of the credibility interval, indicating that this regression co-efficient likely represents a positive effect.[5] Next, we hypothesized a positive effect between COVID-19 moral disengagement and employees' enactment of CDC-recommended behaviors while at work and outside of the work setting (Hypotheses 2a and 2b). In support of these hypotheses, the posterior distribution medians were −0.20 (95% CI [−0.26, −0.14]) and −0.28 (95% CI [−0.35, −0.21]), respectively.[6]

We further hypothesized that the relationship between perceived COVID-19 safety climate on COVID-19 moral disengagement could be dependent on the levels of job insecurity (Hypothesis 3). The interaction effect's posterior distribution median was 0.27 (95% CI [0.01, 0.54]), comporting with our expectation. This interaction is graphically depicted in Fig. 2. As can be seen, under conditions of low job insecurity, there is a negative relationship between employee perceptions of the COVID-19 safety climate and moral disengagement demonstrating the beneficial impact the workplace can have on reducing moral disengagement. However, when job insecurity is high, the relationship between perceived COVID-19 safety climate and moral disengagement is completely attenuated. As such and as shown in Table 3, the indirect effect of COVID-19 safety climate on work and nonwork enactment of the CDC-recommended behaviors is conditional on job insecurity. Our results suggest that the mediation mechanism gets weaker as employee job insecurity increases (see Table 3 for the medians of the posterior distributions).[7] The level-2 effects were all likely null (see the bottom of Table 3).

Last, we hypothesized that the effect of perceived COVID-19 safety climate would spillover to nonwork preventative behaviors (Hypothesis 4). Our results confirmed this hypothesis (see Table 3); perhaps not surprisingly, an exploratory analysis revealed that, while both paths

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[5] The same framework can be applied to all other posterior results. For the sake of brevity, we do not repeat this interpretation every time.

[6] We acknowledge that there are possible alternative specifications of the model we tested and supplementary analyses seem warranted. Upon reviewer recommendation, we tested whether perceptions regarding the COVID-19 safety climate moderates the relationship between moral disengagement and enactment of CDC-recommended behaviors both in work and non-work settings. Posterior results showed that the interaction term posterior distributions were centered around values close to zero, suggesting that these effects are likely null (work posterior median = 0.053, 95% CI [−0.01, 0.10]; non-work posterior median = 0.049, 95% CI [−0.01, 0.11]). We further tested whether COVID-19 safety climate and job insecurity jointly moderated the same relationships. Again, the posterior distributions suggested that these three-way interaction effects are likely null in work (posterior median = 0.01, 95% CI [−0.06, 0.08]) and non-work settings (posterior median = 0.03, 95% CI [−0.05, 0.10]).

[7] We recognize that based on the original Bandura (1990) theory, moral disengagement could also moderate (instead of mediate) the relationship between perceptions of the COVID-19 safety climate and enactment of CDC-recommended behaviors at work and outside of it. It could in fact be argued that such relationship could be weaker for morally disengaged employees because they might believe that (i) it is not their responsibility to prevent the spread of COVID-19 (i.e., diffusion of responsibility), (ii) if they were to catch it, they would likely survive (i.e., distortion of consequences). Upon reviewer recommendation, we tested this proposition. Posterior results showed that the interaction terms' posterior distributions (outcomes are work and nonwork enactment of CDC-recommended behaviors) are centered around values close to zero, suggesting that these effects are likely null (posterior median = 0.00, 95% CI [−0.11, 0.10], and posterior median = 0.05, 95% CI [−0.01, 0.11], respectively). Upon further reviewer recommendation, we also investigated a three-way interaction effect (i.e., COVID-19 safety climate, moral disengagement, and job insecurity); however, it was also a likely null effect (posterior median = 0.01, 95% CI [−0.06, 0.08], and posterior median = 0.03, 95% CI [−0.05, 0.10], respectively).

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were significant, the effect on non-work behaviors was significantly smaller than the effect on work-related behaviors (posterior median of the difference = 0.09, 95% CI [0.02, 0.17]).

4. Discussion

The purpose of our research was to examine employee job insecurity and perceptions regarding the workplace COVID-19 safety climate as antecedents of COVID-19 moral disengagement among employees, while controlling for several plausible individual- and state-level covariates.[8] Further, we assessed how such moral disengagement was related to subsequent COVID-19 prevention behaviors in both work and non-work settings. As such, our study was situated at the nexus of occupational safety, economic stress, and business ethics. As hypothesized, we found that when the organizational COVID-19 safety climate was perceived to be more positive, later levels of employee self-reported moral disengagement concerning potentially harmful health behaviors were lower. Further, employees who exhibited lower levels of moral disengagement were more likely to subsequently enact the recommended CDC COVID-19 prevention behaviors both while at work and outside of the work setting. However, we also found that a prevalent economic stressor during the pandemic (i.e., job insecurity) acts as a boundary condition for the beneficial impact of a positive COVID-19 safety climate on employee moral disengagement levels, as well as their downstream effects on COVID-19 prevention behaviors. In other words, when levels of employee job insecurity were high, that beneficial impact of a positive COVID-19 safety climate on moral disengagement and subsequent prevention behaviors was completely attenuated. Below we consider the theoretical and practical implications of these findings with an emphasis on the themes of this *Safety Science* special issue.

4.1. Theoretical and practical implications

Our data highlight the increased *blurring between people's work and personal lives* by demonstrating the potential impact that an employee's workplace climate can have on activating (or suppressing) moral disengagement mechanisms and their subsequent effects on not only behavior while at work, but also non-work behaviors during their personal time away from work. Specifically, in the context of the current pandemic, organizations appear to play a critical role in helping to shape normative behavioral expectations regarding COVID-19 prevention behaviors both within *and outside of* the physical workplace. This is significant given that survey data suggest that for a large proportion of the workforce, their home may be their workplace for the foreseeable future. For example, Gallup found that 45% of the workforce was working remotely in September of 2021; importantly, these numbers were unchanged from rates earlier in July or August, suggesting that such remote working trends may have stabilized and gained permanence (Saad & Wigert, 2021). Moreover, even complex and safety critical industries are being managed from home as a result of the pandemic. Research (e.g., Ashraf et al., 2022) suggests that new challenges associated specifically with such remote work (e.g., poor quality of remote hazard identification, no remote working infrastructure, poor communication with remote workers, inadequate training on the use of remote working tools, etc.) may be leading to safety failures. While our data only utilized onsite workers, these trends in the blurring of work and home locations only further reinforce the important role of a strong organizational safety climate that can reach beyond the physical workspace.

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[8] A note of caution about interpreting our L2 effects is warranted. Although employees were nested within 38 states, each cluster had a relatively low membership number (range: 1–17), which poses questions about the reliability of the means. Further, our posterior estimates were rather uncertain, especially for the effect of statewide COVID-19 cases.

Table 1

Descriptive statistics, reliability coefficients, and correlations.

	M	SD	1	2	3	4	5	6	7
T1 Perceived COVID-19 Safety Climate	5.40	1.11	(0.85)						
T1 Job Insecurity	0.63	0.93	−0.11	(0.94)					
T1 Prior Exposure to COVID-19	0.64	0.86	0.11	0.01					
T2 COVID-19 Moral Disengagement	2.84	1.54	−0.25**	−0.10	−0.07	(0.94)			
T3 Enactment of CDC-Recommended Behaviors (Work)	4.14	0.75	0.60***	0.00	0.10	−0.48***	(0.87)		
T3 Enactment of CDC-Recommended Behaviors (Nonwork)	3.82	0.82	0.46***	0.04	0.07	−0.57***	0.84***	(0.86)	
Statewide Mask Enforcement	0.58								
Statewide COVID-19 Cases	119.82	27.42							−0.29

Note. N = 141 and values in parentheses are Cronbach's alphas. Correlations are shown only at the appropriate level.

Our research indicates that the extent to which employees view their organization as valuing, rewarding, and reinforcing the CDC workplace guidelines can spillover to impact their personal enactment of the recommended CDC COVID-19 prevention guidelines during their non-working hours. If an employer is seen as taking the pandemic seriously by emphasizing prevention of COVID-19 transmission (e.g., provision of appropriate PPE, facilitating social distancing) and rewarding employee behavior which reduces such transmission (e.g., encouraging sick workers to stay home), then employee COVID-19 moral disengagement levels appear to be reduced and accompanied by greater subsequent adherence to the CDC recommended guidelines.

These findings also have implications for the *surge in new working arrangements*. While research on organizational safety climate has traditionally considered the impact of such climate on work behaviors and injury outcomes while *on the job* (e.g., Clarke, 2006, 2010), our data indicate that the impact of individual perceptions of the COVID-19 safety climate generalize across work *and nonwork* settings. As noted above, given the likelihood that a significant proportion of the workforce will remain remote or have more flexible in-person/remote arrangements after the pandemic is over (Gerdeman, 2021), this has implications regarding the extent to which organizational investments in fostering a positive safety climate can benefit those employees who may not be working onsite or have less traditional work arrangements. On the one hand, although all of our participants were working onsite throughout the course of our study, the beneficial effects of a positive COVID-19 safety climate did generalize to employee behavior occurring offsite as well. However, as organizations increase their reliance on non-traditional and/or new types of working arrangements (e.g., remote workers, zero-hour contracts, etc.), our results suggest that employers will need to make concerted efforts to foster and support the health and safety of their employees through social exchange processes that may otherwise be weakened by such work arrangements (Probst et al., 2021a).

Our results, also offer a *new perspective on the scope of safety management systems* and indicate that the context in which safety should be viewed is broader than the physical workspace, but rather may extend to the safety-related decision making and behaviors that employees enact while away from work. This has implications beyond the current pandemic given the increasing prevalence of new work arrangements (e. g., remote workers) which has only been accelerated by the pandemic. Moreover, these findings comport with recent research (Probst et al., 2021b) demonstrating that an organization's COVID-19 safety climate impacts non-work sickness presenteeism behaviors (e.g., going to public places such as restaurants, gyms, and/or grocery stores while knowingly sick with or exposed to COVID-19) even among employees who are working remotely and not onsite. While our study only examined employees working onsite, our findings lend support to that initial work suggesting that climate can shape employee attitudes and behavior even among those working entirely remotely.

Our study also has implications for an *expanded conceptualization of safety climate*, not only due to the focus on COVID-19 safety climate, but also due to our emphasis on illness prevention rather than the traditional

focus of safety climate research which has largely emphasized prevention of occupational injuries and organizational accidents rather than including disease transmission. While, for example, the Bureau of Labor Statistics tracks the incidence rates of occupational injuries and illnesses and organizational recordable rates include both work-related injuries and illnesses, most safety climate research is focused on predicting "safety" behavior that will prevent accidents and injuries (e.g., Beus et al., 2010; Clarke, 2006, 2010), rather than "healthy" behaviors that can prevent illness and disease as well. Apart from research conducted within the healthcare sector which has examined safety-related precautions to avoid needlestick injuries and other bloodborne pathogens that can transmit disease, by and large most non-healthcare sectors have typically focused on injury prevention rather than illness prevention (and more specifically, prevention of infectious diseases). Thus, to date, researchers have largely omitted this second, yet important, safety domain of illness prevention in addition to injury prevention.

While our measure of the COVID-19 safety climate is specific to the prevention of this particular disease, our study highlights the importance of building a strong safety climate, not only with respect to traditional conceptualizations of safety climate as it pertains to workplace injuries, but also as an expanded conceptualization considering normative behaviors related to the transmission of infectious illness and disease. This has broader implications for how as a field we might reconsider the overarching construct of safety climate and expand its conceptualization to more broadly focus on illness prevention in addition to injury prevention. Moreover, this goes beyond the current pandemic, as sickness presenteeism and organizational expectations for provision/utilization of sick leave have not traditionally been conceptualized under the umbrella of safety climate. Rather the focus has been on physical injuries, although our current research suggests we might fruitfully broaden our conceptualization of safety climate to also take into account workplace norms regarding illness and disease transmission and the extent to which employees perceive that their organization values, rewards, and encourages illness prevention. Thus, safety-related research that has traditionally focused on explaining and predicting workplace injuries might be fruitfully adapted to other aspects of risk such as transmission of infectious diseases. For example, adapting Neal et al.'s (2000) four components of safety climate, one might also consider examining perceptions related to management value of worker health, health-related communication, risk management systems to reduce disease transmission, and training to improve worker health and/or reduce disease transmission.

Finally, our research highlights the *importance of employment instability* as a limiting boundary condition for effectively implementing a strong safety climate. A significant body of research has found job insecurity to be a precursor of safety-related attitudes and behaviors, as well as workplace accidents and injuries (Probst & Brubaker, 2001). Our current findings indicate that job insecurity may also act to attenuate the beneficial impact of a positive COVID-19 safety climate on attitudes and behaviors related to illness and disease transmission prevention. Given our initial contention that the current pandemic has spurred a public health crisis coupled with an economic crisis, our data showing that

Table 2
Bayesian priors for parameters of substantive interest.

Parameter	Prior Distribution	Justification
Job insecurity -> moral disengagement	N~ (0.21,0.5)	We took the prior mean from Probst et al. (2020b), who investigated a similar relationship in the context of safety moral disengagement. We used a rather large prior variance to reflect (and model) the fact that although we believe that safety moral disengagement and COVID-19 moral disengagement are closely connected (and measured similarly), there is likely some uncertainty around the prior mean.
COVID-19 safety climate -> moral disengagement	N~ (−0.11,0.5)	We took the prior mean from Petitta et al. (2017), who investigated the effect of safety culture on safety moral disengagement. We used a rather large prior variance to reflect (and model) the fact that although we believe that safety culture and COVID-19 safety climate are closely connected, there is likely some uncertainty around the prior mean.
Moral disengagement -> Enactment of CDC-recommended behaviors (work)	N~ (−1.01,0.5)	We took the prior mean from Probst et al. (2020b), who investigated a similar relationship in the context of safety moral disengagement and safety behaviors. We used a rather large prior variance to reflect (and model) the fact that although we believe that safety moral disengagement and COVID-19 moral disengagement are closely connected (and measured similarly) and the enactment of CDC-recommended behaviors at work is a type of safety behavior, there is likely some uncertainty around the prior mean.
Moral disengagement -> Enactment of CDC-recommended behaviors (nonwork)	N~(−1.52, 1)	Subjective prior. We would expect this relationship to be stronger than the effect of moral disengagement on work behaviors because of the absence of organizational variables (e.g., supervisor enforcement) that could potentially affect employees' compliance. For this reason, we specified the prior mean as one-and-a-half the prior mean of the relationship between moral disengagement and work behaviors and doubled the prior variance to reflect higher uncertainty.
COVID-19 safety climate -> enactment of CDC-recommended behaviors (work)	N~ (0.43,0.08)	We took the prior mean from Clarke's (2006) *meta*-analytical estimate of the relationship between safety climate and safety compliance. Our prior variance is three times the squared SD reported by Clarke to reflect some uncertainty because we are using COVID-specific variables.
COVID-19 safety climate -> enactment of CDC-	N~(0.21,1)	Subjective prior. We would expect safety climate effect to extend to nonwork outcomes due

Table 2 (*continued*)

Parameter	Prior Distribution	Justification
recommended behaviors (nonwork)		to the spillover effect of normative expectations, such as preventative behaviors (although to a lesser extent compared to work safety behaviors). We recognize that compliance with CDC-recommended behaviors might be a function of other variables, such as COVID-19 attitudes, worry, and impact on one's significant others (Bazzoli et al., 2021). For this reason, we specified the prior mean as half of the effect of safety climate on work behaviors and significantly increased the posterior variance to reflect greater uncertainty.
All other parameters	Varies	No expectations; software default.

Note. N = normal distribution.

these two aspects interact in the workplace may complicate the picture for an eventual pandemic recovery. In other words, our data suggest that to effectively increase adherence to the CDC recommended COVID-19 prevention guidelines and stem the tide of the pandemic, we need to address the economic (job insecurity) crisis while also attending to public health messaging. Encouragingly, our data suggest that the workplace can play a key role in both of these areas. However, as noted earlier, as organizations increase reliance on non-traditional forms of work arrangements that may weaken the social exchange processes between employee and employer, they may need to make more concerted efforts to convey that they value, reward, and enforce adherence to health and safety guidelines.

4.2. Limitations and directions for future research

While the data used in this study consisted of 3 waves of cross-lagged surveys, we did not have a fully longitudinal design. As a result, while the 2-month lagged approach between waves helped to reduce issues associated with common method variance, it does not control for prior levels of the dependent variables, nor allow for testing of possible instances of reverse or reciprocal causality. Therefore, future research addressing the relationship between safety climate and subsequent employee moral disengagement and enactment of prevention behaviors (either specific to COVID-19 or more broadly with respect to illness and injuries) should use a longitudinal design and/or consider using latent growth curve modeling approaches to test hypotheses about changes in such variables over time.

Additionally, because we used a convenience sample drawn from MTurk rather than a sample that is nationally representative of the current labor force, caution is warranted regarding the extent to which our results will generalize to the broader working population. While our sample was racially diverse (21% non-White compared to 23% in the U. S. labor force; Bureau of Labor Force Statistics, 2021a) and approximating the age of the current workforce (mean age of 41.33 compared to the median worker age of 42.5), our respondents were more highly educated (86% graduated from college compared to 44% in the labor force) and consisted of proportionally more men (60%) compared to 53% in the labor force.

In a similar fashion, our MTurk sample did not allow us to test whether employee perceptions of their workplace COVID-19 safety climate were indeed shared by others within their workplace. As such, we could not evaluate workgroup- or -organizational-level safety climate and instead can only draw conclusions regarding the

Table 3
Posterior Parameter Estimates.

Parameter	Estimate (Median)	Posterior SD	95% CI		Relative deviation (Double iterations)	Size of Effect (Priors)
			LB	UB		
Within Effects						
Outcome: COVID-19 Moral Disengagement						
Perceived COVID-19 Safety Climate	−0.29	0.14	−0.56	−0.03	0.34%	2.99%
Job Insecurity	−0.18	0.16	−0.51	0.14	0.54%	11.48%
Interaction	0.27	0.14	0.01	0.54	0%	3.90%
Prior Exposure to COVID-19	−0.10	0.15	−0.40	0.20	0.97%	0.98%
R^2	0.09					
Residual Variance	2.28					
Outcome: Enactment of CDC-Recommended Behaviors (Work)						
COVID-19 Moral Disengagement	−0.20	0.03	−0.26	−0.14	0.51%	1.02%
Perceived COVID-19 Safety Climate	0.31	0.04	0.22	0.40	0.32%	0.29%
Prior Exposure to COVID-19	−0.003	0.05	−0.11	0.10	0%	33.33%
R^2	0.47					
Residual Variance	0.25					
Indirect Effect (Low Job Insecurity)	0.11	0.04	0.04	0.20	0.92%	1.86%
Indirect Effect (Average Job Insecurity)	0.06	0.03	0.01	0.12	0%	1.78%
Indirect Effect (High Job Insecurity)	0.005	0.04	−0.07	0.08	0%	37.5%
Outcome: Enactment of CDC-Recommended Behaviors (Non-work)						
COVID-19 Moral Disengagement	−0.28	0.04	−0.35	−0.21	1.06%	0.72%
Perceived COVID-19 Safety Climate	0.22	0.06	0.11	0.33	0.46%	0.93%
Prior Exposure to COVID-19	−0.003	0.06	−0.13	0.12	40%	33.33%
R^2	0.42					
Residual Variance	0.38					
Indirect Effect (Low Job Insecurity)	0.16	0.06	0.05	0.28	0.64%	1.30%
Indirect Effect (Average Job Insecurity)	0.08	0.04	0.01	0.17	0%	2.47%
Indirect Effect (High Job Insecurity)	0.007	0.05	−0.10	0.11	0%	41.67%
Between Effects						
Outcome: Enactment of CDC-Recommended Behaviors (Work) - L2 Intercepts						
Mask Enforcement	0.10	0.21	−0.32	0.53	0%	0.36%
COVID-19 Cases	−0.004	0.004	−0.01	0.003	0%	0%
Residual Variance	0.23					
Outcome: Enactment of CDC-Recommended Behaviors (Work) - L2 Intercepts						
Mask Enforcement	−0.10	0.18	−0.24	0.47	4.97%	0%
COVID-19 Cases	−0.006	0.003	−0.01	0.001	0%	0%
Residual Variance	0.11					

Note. Parameter estimates are unstandardized, L2 = Level-2, CI = Bayesian credibility interval. Deviance = 876.561.
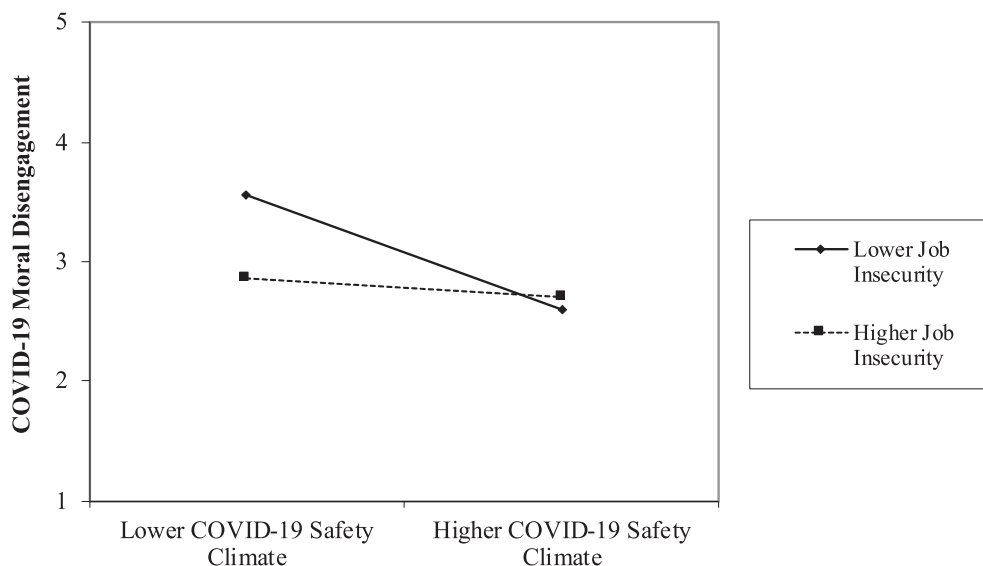

Fig. 2. COVID-19 Safety Climate X Job Insecurity Interaction Plot Note. The interaction is depicted at +1 and −1 standard deviations.

relationship between individual-level perceptions of the COVID-19 safety climate and our outcomes of interest. Thus, future research should evaluate the extent to which there are shared perceptions of the COVID-19 climate and whether these shared perceptions predict workgroup- and organizational-level outcomes such as compliance with the CDC behavioral recommendations and COVID-19 transmission rates.

Indeed, although our study demonstrated important linkages between the workplace COVID-19 safety climate, employee job insecurity,

and moral disengagement with employee enactment of the recommended CDC COVID-19 prevention behaviors in and outside of work, it would be beneficial to test the impact of these variables beyond self-reported behavioral outcomes. Thus, a valuable next step would be to examine actual COVID-19 transmission rates within organizational settings to determine how these may vary as a function of the COVID-19 safety climate, employment instability, and activation of moral disengagement mechanisms.

Along similar lines, it would also be beneficial to consider the multilevel context within which employees and businesses operate as neither exist within a vacuum. Rather, state-level COVID-19 related restrictions on business operations and guidance for workplaces differs greatly across the U.S. Therefore, it would be important to examine the extent to which the broader state-level climate reinforces vs. detracts from the workplace COVID-19 climate efforts and how these might interact to impact subsequent employee attitudes and behaviors. In addition to state-level COVID regulations and policies, this might also include a consideration of the political climate. Growing anecdotal and empirical evidence indicates that the current politically charged environment affects individual behavior; therefore, individual, workgroup, organizational, and state-level political attitudes and climate may influence what is defined as moral behavior and therefore shape perceptions regarding what constitutes moral disengagement.

Additional multilevel explorations might be fruitful. For example, it would be useful to examine the extent to which supervisor COVID-19 prevention behaviors (or lack thereof) might influence the workgroup norms and behaviors of their subordinates. At a national level, examining country-level differences in clarity and consistency of messaging as well as federal enforcement (vs. recommendations) of disease prevention guidelines might impact variance observed within and between organizations. Such explorations could potentially help identify best practices at multiple levels of intervention with respect to pandemic management and reduction of disease transmission moving forward.

Finally, from a business ethics perspective, our research raises important questions about the influence of an employee's workplace climate on their behavior in non-work settings. Thus, beyond having implications for the current pandemic, it raises the question of how a company's safety climate (or other climate aspects) might impact other non-work variables such as fostering helping behaviors and/or reducing counterproductive behaviors – both of which are desirable outcomes within and outside of organizations.

5. Conclusion

The COVID-19 pandemic has unleashed an unprecedented public health crisis coupled with an economic crisis unlike the world had seen in the past century. It has also changed the nature of safety science itself, with the surge in new working arrangements and concomitant increased blurring of work and non-work roles requiring new perspectives on the scope of safety management systems and an expanded conceptualization of safety climate itself. Over three-quarters of a million lives have been lost within the U.S. (CDC, 2021); millions of workers lost their jobs at a rate unseen since the Great Depression (BLS, 2021b). In the months since the start of the pandemic in March 2020, we have witnessed vastly varying degrees of adherence to the CDC recommended COVID-19 prevention guidelines, including repeated calls for social distancing, wearing masks, limiting non-essential trips in public settings, etc. The results of the current study suggest the important role that organizations can play in enhancing COVID-19 prevention behaviors in and out of the workplace by fostering a positive COVID-19 safety climate, coupled with efforts to reduce job insecurity among employees. Doing so can result in reduced COVID-19 moral disengagement and greater adherence to the public health guidelines meant to stem the transmission of the novel coronavirus at work and in our communities.

6. Funding

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data needed to evaluate the conclusions in the paper can be provided by the corresponding author pending scientific review and a completed nondisclosure agreement. Requests should be submitted to the corresponding author.

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ssci.2022.105703.

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